

REMARKS

The Examiner has not considered the Supplemental Information Disclosure Statement filed April 4, 2002, as no PTO 1449 was allegedly received by the USPTO. Applicants have attached hereto a copy of the omitted PTO 1449 along with a copy of a stamped postcard indicating that the PTO 1449 was received by the USPTO. Applicants hereby request the Examiner to consider the references listed in the PTO 1449.

The Examiner rejects Claims 56, 58-60, 62-64, 67-76, and 79-87 under 35 U.S.C. Section 102(b) as being anticipated by U.S. Patent 4,840,004 to Ting ("'004 patent") and Claims 56, 61, 65-67, 69, 77-80, and 88-89 under Section 102(b) as being anticipated by U.S. Patent 5,452,552 to Ting ("'552 patent").

Applicants respectfully traverse the Examiner's rejections. The '004 and '552 patents fail to teach or suggest at least the following italicized features of the independent claims:

56. A wall system, comprising:

at least a first perimeter framing member configured to hold opposing interior and exterior surfaces of at least a first wall panel;

at least a second perimeter framing member configured to hold opposing interior and exterior surfaces of at least a second wall panel, wherein the first and second perimeter framing members engage one another, wherein at least one of the first and second perimeter framing members defines a recess relative to exterior surfaces of the first and second wall panels, wherein at least one of the first and second perimeter framing members comprises a plurality of drainage holes, wherein the plurality of drainage holes are in fluid communication with a gutter located in an interior region behind the first and second panels and the first and second perimeter framing members, and wherein the gutter collects and provides to the drainage holes moisture located in the interior region for discharge into an exterior environment located exteriorly of the first and second perimeter framing members and first and second wall panels; and

a capillary break positioned on at least one of the first and second perimeter framing members, wherein the capillary break is spaced from the plurality of drainage holes and, along with surfaces of the recess, defines a circulating chamber, whereby entry of terrestrial fluids into at least one of the plurality of drainage holes is impeded, *wherein a free end of the*

*capillary break is separated from one of the first and second perimeter framing members by a gap through which terrestrial fluids pass to enter the circulating chamber, wherein a lower surface of the circulating chamber is contoured to permit terrestrial fluids collected in the circulating chamber to flow through the gap along the lower surface for discharge into the exterior environment, and wherein the capillary break and the plurality of drainage holes are located above the free end of the capillary break.*

67. A wall system, comprising:

at least a first perimeter framing member configured to hold opposing interior and exterior surfaces of at least a first wall panel;

at least a second perimeter framing member configured to hold opposing interior and exterior surfaces of at least a second wall panel, wherein the first and second perimeter framing members engage one another, wherein at least one of the first and second perimeter framing members defines a recess relative to exterior surfaces of the first and second wall panels, wherein at least one of the first and second perimeter framing members comprises a plurality of drainage holes, wherein the plurality of drainage holes are in fluid communication with an interior region and discharge moisture located in the interior region into an exterior environment located exteriorly of the first and second perimeter framing members and first and second wall panels; and

a capillary break positioned on at least one of the first and second perimeter framing members, wherein the capillary break is spaced from the plurality of drainage holes and located between exterior surfaces of the first and second panels and the drainage holes, whereby entry of terrestrial fluids into at least one of the plurality of drainage holes is impeded, *wherein the capillary break and walls of the recess define a circulating chamber located in the recess, wherein a free end of the capillary break is separated from one of the first and second perimeter framing members by a gap through which terrestrial fluids pass to enter the circulating chamber, wherein a lower surface of the circulating chamber is contoured to permit terrestrial fluids collected in the circulating chamber to flow along the lower surface and through the gap for discharge into the exterior environment, and wherein the capillary break and the plurality of drainage holes are located above the free end of the capillary break.*

79. A wall system, comprising:

at least a first perimeter framing member configured to hold opposing interior and exterior surfaces of at least a first wall panel;

at least a second perimeter framing member configured to hold opposing interior and exterior surfaces of at least a second wall panel, wherein the first and second perimeter framing members engage one another, wherein at least one of the first and second perimeter framing members defines a recess relative to exterior surfaces of the first and second wall panels, wherein at least one of the first and second perimeter framing members comprises a plurality of drainage holes, wherein the plurality of drainage holes are in fluid communication with a gutter located in an interior region behind the first and second panels

and the first and second perimeter framing members, and wherein the gutter collects and provides to the drainage holes moisture located in the interior region for discharge into an exterior environment located exteriorly of the first and second perimeter framing members and first and second wall panels; and

capillary break means positioned on at least one of the first and second perimeter framing members for redirecting flow of terrestrial fluids, wherein the capillary break is spaced from the plurality of drainage holes and, along with surfaces of the recess, defines a circulating chamber operable to impede entry of terrestrial fluids into the interior region, *wherein a free end of the capillary break means is separated from one of the first and second perimeter framing members by a gap through which terrestrial fluids pass to enter the circulating chamber and wherein a lower surface of the circulating chamber is contoured to permit terrestrial fluids collected in the circulating chamber to flow along the lower surface and through the gap for discharge into the exterior environment, and wherein the capillary break means and the plurality of drainage holes are located above the free end of the capillary break means.*

The '004 Patent

The '004 patent is also directed to a wall panel attachment system. Figure 2 of the '004 patent illustrates attached horizontal perimeter framing members 18 and 19 which include a horizontal joint rain screen member 30 to separate the horizontal wall cavity into an outer horizontal cavity 31 (which equates to the inlet) and an inner horizontal cavity 32 (which equates to the circulating chamber). Water entering into the inner horizontal cavity 32 is "drained into the concealed horizontal cavity 34 through the drainage hole 35" (col. 4, lines 4-7) and from the concealed horizontal cavity 34 through the open end of the concealed horizontal cavity (col. 4, lines 7-8) and into the vertical wall joint 13 (shown in Figures 1 and 3). Because the rain screen member 30 projects upwardly from the perimeter framing member 18 and not downwardly from the perimeter framing member 19, the water cannot flow out of the inner horizontal cavity, through the gap past the rain screen member 30, through the outer horizontal cavity 34 and into the exterior environment, as in the wall system of present invention. The need to have a concealed horizontal cavity 34 in the

‘004 patent system to prevent build up of water in the inner horizontal cavity 32 renders the wall system of the ‘004 patent significantly more complex and therefore more expensive to manufacture and install than the wall system of the present invention. Moreover, the ‘004 patent states that “[t]he design prevents the exterior water from reaching the wall joint seals eliminating water leakage *without using an internal gutter system*” as in the claimed invention. (Abstract, Emphasis supplied.)

The ‘552 Patent

The exterior curtain wall system of the ‘552 patent comprises, with reference to Fig. 2a, first and second perimeter framing members 15 and 21, a rain screen member 24, drainage holes 38 and 68, downwardly extended leg 34, and an external gutter 26 confined by end dams 39. Most of the wind driven water will be repelled by the rain screen member 24 and spilled over water is guided into the external gutter 26 by the leg 34. Since both the external gutter 26 and the drainage tunnel 27 are pressure equalized, the drainage of water from the external gutter 26 into the drainage tunnel 27 through the drainage holes 38 is instantaneous and there will be no water buildup in the external gutter 26. (Col. 4, lines 33-41.) As can be seen from this discussion, the water moving beyond the rain screen member 24 and into the gutter 26 via the gap between the free end of the member 24 and the opposing wall of the first perimeter framing member 21, unlike the claimed invention, is not able to pass back through the gap. It is blocked by the rain screen member 24. Rather, the water is collected adjacent to the drainage hole 38, passes through the hole 38 and into the drainage tunnel 27 and is carried out to the edge of the framing member and into the joint for disposal. The need to have a concealed drainage tunnel 27 to prevent water build up in the gutter 26 renders the system of

the '552 significantly more complex and expensive to manufacture and install than the wall system of the present invention.

The Examiner asserts that either the rain screen member 24 or the leg 34 can be the capillary break. Because the leg 34 extends upwardly from the lower perimeter framing member rather than downwardly from the upper perimeter framing member, it cannot be the capillary break as set forth in the amended claims. Likewise, the drainage holes as claimed cannot be the drainage holes 38 as the drainage holes are not located above the free end of the "capillary break" (rain screen member 24).

For the foregoing reasons, Applicant believes that Claims 56-89 are allowable over the '004 and '552 patents.

The dependent claims provide additional bases for finding allowance.

By way of example, dependent Claims 58, 70 and 81 require the cross-sectional areas of flow past the capillary break and into the circulating chamber to be at specified levels to induce vortexing of the terrestrial fluid in the circulating chamber. (Specification at page 4, line 20, to page 6, line 4)

Dependent Claims 57, 59, 69, 71, 80, and 82 require specified minimum distances between the capillary break and the drainage holes. (Specification at page 13, line 13, to page 14, line 2) The '552 patent teaches that the drainage holes are in front of the rain screen member 24.

Dependent Claims 60, 62, 66, 72, 74, 78, 83, 85, and 89 require certain dimensional relationships between the capillary break and/or drainage holes. These features are not suggested nor disclosed by the '004 and '552 patents.

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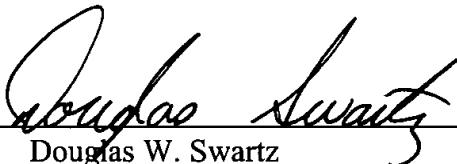
Dependent Claim 61, 73, and 84 require the rear surface of the capillary break to be concave to assist the formation of vortex flow conditions in the terrestrial fluid. (Specification at page 13, lines 4-6) These features are neither suggested nor disclosed by the '004 and '552 patents.

Applicant has added new claims 104-112 which provide further bases for allowance.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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Date: Oct. 15, 2003